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ABSTRACT

This courseware evaluation rates a set of 25 industrial education general software programs developed by the Iowa Department of Public Instruction. (These programs--not contained in this document--include measurement drill, fraction drill, loan and interest cost analysis, assault vehicle speeds, sun's rays, Ohm's law, concrete calculations, roof framing, and board feet.) Part A describes the programs in terms of subject area (electricity, transportation, energy) and hardware requirements (Apple II), indicates their suitability for use as drill or tutorial in grades 9-12, and gives a time estimate (1-15 minutes). Availability information includes cost ($1.00 plus disk) and contact address. Part B contains the evaluation criteria in eight categories; reviewer ratings appear as yes, somewhat, no, and not applicable, with explanatory comments. Part C summarizes the evaluation. These programs received somewhat ratings for subject matter, technical presentation, student and program interaction, and work behaviors and a no rating for documentation. Reviewers noted that, although inexpensive, the programs needed documentation and their content may be of low interest. The courseware was recommended with reservations. (SK)

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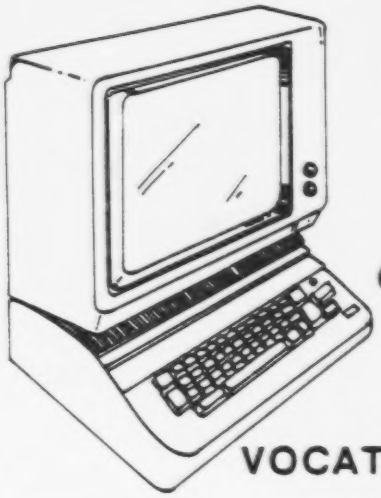

INDUSTRIAL EDUCATION, GENERAL PROGRAMS.

COURSEWARE EVALUATION

FOR

VOCATIONAL AND TECHNICAL EDUCATION

The evaluation of this courseware program was conducted by a team participating in the Courseware Evaluation Network. The Network, established in 1985, is coordinated by the National Center for Research in Vocational Education under the sponsorship of the U.S. Department of Education, Office of Vocational and Adult Education. The purpose of the Network is to identify and evaluate microcomputer courseware, and to disseminate courseware reviews for vocational and technical education.

Each Network team includes three members, at least one of which is, or recently has been, a vocational or technical teacher in the subject matter area of the courseware being evaluated. The evaluation represents a synthesis of the opinions of the team members. It is suggested that the evaluation be used as a first screening device for courseware and that the teacher also evaluate the courseware program on the basis of specific student needs.

The Courseware Evaluation: Form and Guide used for all of the Network evaluations was developed by the National Center and is available through its cost-recovery system.

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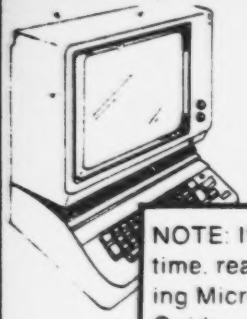

COURSEWARE EVALUATION FORM

NOTE: If you are using this form for the first time, read the instructions in the accompanying Microcomputer Courseware Evaluation Guide.

Evaluator Gordon Turner; Richard Gifford; Doug Beard

Position

Date 5/4/87

Part A: Courseware Description

In the following sections, record descriptive information about the courseware that you are evaluating.

I. IDENTIFICATION

Program Title Industrial Education; General Programs. Date 1984

Series Title Iowa Industrial Education Programs, (Disk one - 25 programs)

Vocational Area(s) Industrial Arts; Trade and Industrial Education

Subject Area(s) Electricity; Transportation; Energy

Topic(s)

Developing Agency Iowa Department of Public Instruction

Street or P.O. Box Grimes State Office Building

City Des Moines, State IA. Zip 50319 Phone(515) 281-3038

Author(s)

Programmer(s)

II. HARDWARE REQUIREMENTS

Microcomputer* Apple II Series
(brand/model)

K Memory Required 48K
(number)

Medium of Transfer (include number of each):

__ Tape cassette
__ ROM cartridge
X 5¼" Flexible disk
__ 8" Flexible disk
__ Other _____
(specify)

Programming Language Apple Software DOS Specifications 3.3

Other Specifications

Peripherals Needed (check all that apply):

__ Color monitor
X One disk drive
__ Two disk drives
__ Plotter
__ Game paddle(s)
__ Joystick(s)
__ Modem
__ Mouse
__ Printer
__ Graphics tablet
__ Light pen
__ Voice/sound instrument
__ Clock
__ Video disk
__ Touch screen
__ Ten-key number pad
__ Other _____
(specify)

*NOTE: Provide the above information for any additional hardware on which this program can be used.

Part A: Courseware Description

III. PROGRAM FEATURES (check all that apply):

- ___ Network version provided
- ___ Multiple copies required
- X Program can be modified
- ___ Program protected
- ___ Data disk needed
- ___ Field-test data available

IV. INSTRUCTIONAL SETTING

Program mode (check all that apply):

- ___ Application
- X Drill and practice
- ___ Educational gaming
- ___ Simulation
- X Tutorial
- ___ Other _____ (specify)

Student Target Population (check all that apply):

- X Regular
- ___ Disadvantaged
- ___ Handicapped
- ___ Limited English
- ___ Bilingual
- ___ Gifted

Grade Level (check all that apply):

- ___ K-6
- ___ 7-8
- X 9-10
- X 11-12
- ___ 13-14
- ___ Adult
- ___ Higher Education

Instructional Grouping (check all that apply):

- X Individual
- X Small group (up to 4)
- ___ Large group (4 or more)
- ___ competitive interaction
- X cooperative interaction

Prerequisite Student Skills (specify) Content Instruction (Basic) before any

Accompanying Materials (specify types):

Documentation One page, Print

Student support materials _____

Teacher support materials _____

Correlated materials _____

Estimated Time for Use 1-15 minutes per program (25 Programs)

V. AVAILABILITY

- ___ Free _____ (copies)
- ___ Loan _____ (time)
- ___ Duplication (requestor supplies disk)
- X Sale $1.00 + Disk
- ___ Rent $ _____ _____ (time)

Copyright Restrictions (explain) None, Public Domain.

Back-up Policy (explain) _____

Preview Policy (explain) _____

Update Policy (explain) _____

Contact Publications Section, Iowa State Department of Instruction

Street or P.O. Box Grimes State Office Building

City Des Moines, State IA. Zip 50319 Phone (515) 281-3038

Part B: Courseware Evaluation Criteria

Indicate the applicability of each section to the courseware being evaluated by checking either "___ A" (applicable) or "___ N/A" (not applicable). If a section is not applicable, proceed to the next section. If a section is applicable, check the column that indicates how well the courseware meets each criterion. Include any comments.

	YES	SOME-WHAT	NO	N/A	COMMENTS
I. SUBJECT MATTER _X_ A ___ N/A					
1. Subject matter has educational value.		X			
2. Student objectives are stated.		X			
3. Subject matter is accurate.		X			
4. Subject matter is logically presented.		X			
5. Subject matter is free of race, ethnic, sex, and other stereotypes.	X				
6. Subject matter is on the level of the students.	X				
7. Information and skills presented are comparable to those used in the home, business, or industry.		X			
8. Subject matter motivates students to learn.		X			
9. Subject matter is reviewed and summarized.		X			
10. Program utilizes the unique capabilities of the microcomputer to present the subject matter.		X			
II. TECHNICAL PRESENTATION _X_ A ___ N/A					
1. Program is free of technical problems.		X			
2. Presentation rate is adequate to maintain interest.		X			
3. Information on the screen is easy to read.	X				
4. Program is free of spelling and grammatical errors.		X			
5. Program instructions are easy to follow.	X				
6. Color increases the instructional value of the program.		X			
7. Audio increases the instructional value of the program.			X		
8. Graphics increase the instructional value of the program.		X			

	YES	SOME-WHAT	NO	N/A	COMMENTS
III. STUDENT INTERACTION X A ___ N/A					
1. Students can use the program with minimal assistance.		X			
2. Students are actively involved in the program.		X			
3. Students control the pace of the program.		X			
4. Students can access the program "menu(s)" to change activities.		X			
5. Students are permitted to change answers.	X				
6. Methods of responding correspond to the level of the program.		X			
7. Students' errors of entry are processed so that the program continues to run.	X				
8. Students can access available "help" and "hint" options at any time.			X		
9. Students can enter or exit the program as desired.			X		
10. Students control the sequence of the program.			X		
IV. PROGRAM INTERACTION X A ___ N/A					
1. Feedback is immediate.	X				
2. Cues and prompts are provided to assist students in answering correctly.		X			
3. Feedback reinforces the correct responses.		X			
4. Feedback is nonthreatening.		X			
5. Program helps students understand wrong answers.			X		
6. Program gives the correct answer after a reasonable number of tries.			X		
7. Positive reinforcement is varied.		X			
8. Program has the ability to branch/loop depending upon students' performance.				X	
9. Feedback is on the level of the student.		X			
V. STUDENT EVALUATION X A ___ N/A					
1. Evaluation provides a means for measuring attainment of objectives.		X			
2. Program reports which items were missed and which were correct.		X			

	YES	SOME-WHAT	NO	N/A	COMMENTS
V. STUDENT EVALUATION—*Continued*					
3. Individual student performance results are available to the teacher.			X		
4. Class performance results are available to the teacher.			X		
5. Program provides for printed copies of evaluations.			X		
6. Test item formats are suited to the material being tested.		X			
7. Test items are clearly stated.		X			
8. Test item bank is provided.			X		
VI. DOCUMENTATION ___ A _X_ N/A					
1. Documentation is easy to understand.					
2. Documentation is accurate.					
3. Student objectives are stated.					
4. Underlying concepts are outlined.					
5. Skills to be developed are specified.					
6. Procedures for integrating the program into the curriculum are provided.					
7. Follow-up activities are suggested.					
8. Documentation explains the intended use of support materials.					
9. Sufficient information is provided to operate the program.					
VII. WORK BEHAVIORS _X_ A ___ N/A					
1. Program helps students identify their vocational skills.			X		
2. Program promotes pride in work.		X			
3. Program promotes productivity.		X			
4. Program encourages good work habits.		X			
5. Problem solving is encouraged.		X			
6. Program promotes good human relations skills.		X			
7. Program provides an opportunity for work satisfaction and self-fulfillment.		X			
8. Program encourages creativity.			X		

	YES	SOME-WHAT	NO	N/A	COMMENTS
VIII. APPLICATION PROGRAMS ___ A _X_ N/A (to be completed for application programs **only**)					
1. Program is adaptable to the needs of the student.					
2. Commands are easily remembered.					
3. Information is easily manipulated.					
4. Corrections are easy to make.					
5. Program includes all necessary variables.					
6. Program performs reliably.					
7. Program efficiently achieves its intended purpose.					
8. Trial data are supplied for learning to run the program.					
9. Program provides for use of printer when hard copy of information is advantageous.					
10. Program moves from operation to operation efficiently.					
11. Program is compatible with other application programs.					
12. Program has a supplementary tutorial program available.					

Part C: Courseware Evaluation Summary

1. SUMMARY COMMENTS

Identify strengths of the courseware.

Inexpensive.

Identify weaknesses of the courseware.

Content may be of low interest. Documentation needed.

Describe uses of the courseware in an instructional setting.

Small Group.

2. SUMMARY OF SECTION

Rate the quality of the courseware for each applicable section of this form by checking the appropriate column; if not applicable, check N/A.

	YES	SOME-WHAT	NO	N/A
I. SUBJECT MATTER: Content has educational value.		X		
II. TECHNICAL PRESENTATION: Program is free of malfunctions.		X		
III. STUDENT INTERACTION: Students are actively involved with the program.		X		
IV. PROGRAM INTERACTION: Feedback is effectively employed.		X		
V. STUDENT EVALUATION: Evaluation adequately measures student progress		X		
VI. DOCUMENTATION: Documentation is sufficient to run the program.			X	
VII. WORK BEHAVIORS: Program assists students in developing positive work attitudes and skills.		X		
VIII. APPLICATION PROGRAMS: Program performs the task for which it is intended.				X

3. FINAL RECOMMENDATION

Check your recommendation for the courseware and explain your reasons below.

___ Highly recommend
___ Recommend
_X_ Recommend with reservations
___ Do not recommend

_____

_____